

Printed pages: 2

ECT 607

(Following paper code and roll No. to be filled in your answer book)

Paper code: 164606

Roll No.

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**BTech**  
**(SEM VI) THEORY EXAMINATION 2014-15**  
**CARPET YARN MANUFACTURE-II**

Time allowed: 2 Hrs.

Max Marks: 50

1. Attempt any TWO parts : (2X7=14)
- (a) With a neat sketch elucidate functions of each organ of a TFO machine
- (b) State the basic principles involved in operation of assembly winder machine. With a neat sketch state the functions of different organs of an assembly winding machine.
- (c) One ring doubling machine is running with following particulars
- Count of single yarn-16 Ne  
Spindle speed -12000  
TPI of double yarn -16  
No. of spindle frame -400
- Determine the production per 8 hours of the ring doubling machine (assume any relevant technical data)
2. Attempt any TWO parts : (2X6=12)
- (a) State the relative advantages and disadvantages of new spinning system over ring frame spinning system
- (b) State the principle of operation of Rotor spinning system. How rotor yarn differs from ring frame yarn in quality perspectives?
- (c) Write notes on
- i) Peripheral twist extent (PTE)
- ii) Raw materials required for rotor yarn

3. Attempt any TWO parts : (2X6=12)
- (a) Briefly elucidate various types of raw materials required for friction spun yarn. What are the limitations of friction spun yarn?
- (b) With a neat sketch explain the functions of different of a DREF-3 spinning machine mentioning requisite machine and process parameters.
- (c) State the principles of formation of yarn in air jet spinning system. Illustrate few examples about properties of air jet spun yarn viz a viz ring frame spun yarn.
4. Attempt any TWO parts : (2X6=12)
- (a) Briefly mention the operational principles of formation of yarn in ply fill spinning system. Mention the raw materials requirement of various ply fill yarn.
- (b) Briefly mention the limitation of properties of following yarn over ring spun yarn
- i) Self twist yarn
- ii) Twist-less yarn
- (c) With a neat sketch explain the function of WRAP spinning system. How WRAP spinning system is useful for manufacturing fancy yarn